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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,174	08/18/2003	Masami Shimizu	16965	3607

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EXAMINER

LEUBECKER, JOHN P

ART UNIT	PAPER NUMBER
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3739

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/643,174	SHIMIZU ET AL.	
	Examiner	Art Unit	
	John P. Leubecker	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-13, 16-19, 21-23 and 28 is/are rejected.
- 7) ☒ Claim(s) 8-10, 14, 15, 20 and 24-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/18/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claims 8 and 20 are objected to because of the following informalities: as to claim 8, phrase "is come" in lines 4 and 7 should be --comes--; as to claim 20, phrase "is come" in lines 4 and 6 should be --comes--. Appropriate correction is required.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. It is noted that the language "the hermetic connector being electrically connected to the imaging device" is being interpreted so as claim 1 requires the imaging device in the combination of elements. Although the imaging device is only mentioned functionally in line 4 with respect to the imaging device holding member, the language setting forth the positive connection between the hermetic connector and the imaging device would require the imaging device to be present.

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5. Claims 1, 2, 4-6, 12, 16, 17, 22 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuyuki et al. (U.S. Pat. 5,876,327).

Referring mainly to Figures 4 and 13, Tsuyuki et al. disclose an optical system holding member (45,47) for holding an optical system (43), an imaging device holding member (note internal wall of proximal end of case 42, Fig.4) for holding an imaging device (48), a case (42, Fig.4) for hermetically enclosing the holding members (col.4, lines 37-39), a hermetic connector (proximal end of case 42 encompassing the flexible circuit board 51 and the inherent signal lines extending out of the case) for hermetically sealing the case (as noted above, the case is hermetically sealed) and electrically connected to the imaging device (since the imaging device signal lines will extend through the case, they will contact the connector)¹, a power generator (piezoelectric actuator 55, Fig.13) for generating a driving force to move the optical system holding member (col.13, lines 2-13), and a driving force transfer member (proximal flange of lens frame 45 which accommodates the distal end of the actuator 55 and distal end surface of lens frame 47 with accommodates the proximal end of the actuator, allowing force to be transferred from the actuator to the lens frame 47). The driving force transfer member can also be met by the element that mechanically connects the actuator to the lens frame (47) (e.g., adhesive, solder, screw, etc.) which is not explicitly disclosed but must inherently exist.

6. Claims 1, 2, 4-6, 11, 16, 17, 21 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Lichtman (U.S. Pat. 6,292,221).

¹ It is noted that Applicant's use of "electrically connected" with respect to the imaging device and hermetic connector does not require an electrical connection in the conventional sense of the term. Instead, since the signal lines and pins (33b) are isolated from the connector (33) via glass insulators as set forth in the specification, no

Referring mainly to Figure 10, Lichtman discloses an optical system holding member (328), an optical system (330,332), an imaging device holding member (the inherent structure holding CCD 382 within video camera head 380), an imaging device (382), a case (300,378) for hermetically enclosing the optical system, imaging device and the holding members for each (note hermetic connections, col.9, lines 32-34, col.10, lines 42-43, and use of O-rings throughout Figure 10), a hermetic connector (any part of the proximal end of the housing (300,378) that contains the electrical wires. Note wires 394 and col.10, lines 48-51. These wires "electrically connect" the housing and the imaging device), a power generator (362), and a driving force transfer member (366,348) for moving the optical system and holding member along the optical axis.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5, 7, 13, 16, 18, 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraas et al. (U.S. Pat. 6,529,232) in view of May et al. (U.S. Pat. 6,855,106).

Kraas et al. disclose an optical system (10), a optical system holding member (inner proximal end of tube 4), an imaging device (8), a imaging device holding member (inner surface

electrical currents flow between the imaging device and hermetic connector. Therefore, the "electrical connection" is being interpreted as a mechanical connection between an electrical element and a non-electrical element.

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of plate 6), a case for hermetically enclosing the above mention elements (5, col.2, lines 25-34), a hermetic connector (6) with an electrical connection from the imaging device therethrough, and a driving force transfer member (15, col.2, line 64 to col.3, line 5). Kraas et al. fails to disclose the nature of the driving force which acts on the rod (15). Assuming that the driving force is generated manually, then Kraas et al. fail to disclose a power generator as encompassed by Applicant's claims. However, May teaches that such a manual actuation of a focusing mechanism in an analogous device can be driven by electromechanical means (i.e., motor) (col.10, lines 2-6). Doing so would provide for a more precise adjustment (e.g., micro-movements), take out the manual aspect (e.g., human error) from the adjustment, and allow for remote adjustment. It would therefore have been obvious to one of ordinary skill in this art at the time of the invention to have provided an motor to drive the push rod (15) of Kraas et al. for the reasons set forth above.

Allowable Subject Matter

9. Claims 8-10, 14, 15, 20 and 24-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references show either or both of hermetically sealed camera units or electromechanically actuated focusing arrangements for endoscopic cameras.

Girke et al. (U.S. Pat. 6,464,631)

Tatsuno et al. (U.S. Pat. 6,080,101)

Tatsuno et al. (U.S. Pat. 6,030,339)

Hori (U.S. Pat. 5,895,340)

Akiba (U.S. Pat. 6,572,539)

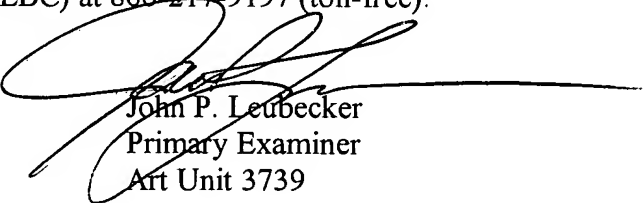
Luloh et al. (U.S. Pat. 6,743,168)

Tatsuno et al. (U.S. Pat. 6,805,665)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Leubecker whose telephone number is (571) 272-4769. The examiner can normally be reached on Monday through Friday, 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John P. Leubecker
Primary Examiner
Art Unit 3739

jpl